

Famed Astronaut Alan Shepard passes away

Editor's Note: Alan B. Shepard, Jr., 74, the first American to fly in space and one of the original Mercury astronauts, died July 21, after a lengthy illness in Monterey, CA. The cause of death was not disclosed. Funeral services are pending.

"The entire NASA family is deeply saddened by the passing of Alan Shepard. NASA has lost one of its greatest pioneers; America has lost a shining star.

Alan Shepard will be remembered, always, for his accomplishments of the past: being one of the original seven Mercury astronauts, for being the first American to fly in space, and for being one of only 12 Americans ever to step on the Moon.

He should also be remembered as someone who, even in his final days, never lost sight of the future.

On behalf of the space program Alan Shepard helped launch, and all those that space program has and will inspire, we send our deepest condolences to his wife Louise, their children, and the rest of the Shepard family.

Alan Shepard lived to explore the heavens. On this his final journey, we wish him Godspeed."

--Statement of NASA Administrator Daniel S. Goldin --



In February 1996, Alan Shepard took a step back in time as he looked into the Mercury capsule that served as the backup for his historic Freedom 7 suborbital mission. On May 5, 1961, in the Freedom 7 spacecraft, he was launched by a Redstone rocket on a ballistic trajectory suborbital flight -- a flight that carried him to an altitude of 116 statute miles and to a landing point 302 statute miles down the Atlantic Missile Range. The backup capsule is on display in the NASA Ames Visitor Center.

photo by Astrid Terlep

Multicultural Street fair sizzles!

On July 15, Ames Research Center celebrated Street Fair II, a multicultural extravaganza of singing, dancing, music, food and merchandise from around the world. And what a celebration it was!

With temperatures pushing into the 90s, the first evidence that El Nino had finally relinquished its grip on the local region came amidst a steamy whirlwind of ethnic cuisine, diverse entertainment, and a selection of clothing, jewelry and other national products. Fair goers not ready to party at the outset were soon caught up in the infectious enthusiasm of the estimated

2,500 in attendance. Not since last year's Open House has Ames seen such a spontaneous exhibition of employee morale and good old fashioned fun!

Sheila Johnson, chair of the food committee, made sure that participants had a wide variety of luncheon items from which to choose -- from the very popular ribs and peach cobbler, to the authentic taquitos, Asian delicacies, manicotti, hamburgers, and Native American fried bread. Lots of free water, generously donated by Albion, was provided at five separate stations, and a selection of sodas and juices were sold by representatives of the Ames Child Care Center. The African-American booth was the first to sell out its food entrees; but the Native-American, hand-prepared items had the distinction of drawing the longest lines. Fortunately, those unable to get their first choice simply moved on to a delicious alternative selection.

But, while the food was a big hit, the entertainment was the star! Visitors to the Center could hardly be blamed if they went looking for Ed McMahon and the "Star Search" set, such was the quality of the offerings. Like a three-ring circus under the big top, entertainment coordinator Darrell Williams had a total of 18 unique acts performing in three different venues. Notably, all of the acts presented involved Ames workers, their associates, and their extended families and friends. Both collectively and individually, they certainly were

an impressive bunch!

Among the dance teams represented were the Mighty Steppers drill team, the Native American "young eagles" singers and dancers, the Flamenco society of San

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photo by Roger Brimmer

Jenny Kahn of Code JH as "Cookie the Clown" with her son Jacob.



photo by Roger Brimmer

Drummers from the San Jose Taiko Group.



see
related
story on
page 6

Ames ISO Web-site address: <http://dqa.arc.nasa.gov/iso9000>

Employee Recognition

Engineers Week awards presented on June 10

Here are some highlights from the presentation that I gave on March 30, at Loyola Elementary School, in Los Altos.

Out of all of the presentations that I have given so far this year, this was far above average, as well as the most enthusiastic and brightest group of students that I have encountered.

They knew about Alan Shepard, and John Glenn; they even knew the name of the first American Astronaut who walked in space (Edward White II).

One of the students was even able to name the three components that make up the shuttle tile. These students are only 4th graders! What was really fun, was having the students describe the benefits of the discovery of ice on the Moon, and the process involved making the ice a consumable product.

Participating in National Engineers Week has been such a great experience. The children's excitement when you walk into a classroom, them already knowing that you are visiting them from NASA is overwhelming.

BY HANK SCHWOOB



photo by Roger Brimmer

Engineers Week Awards - Dale Satranm (right) receives award certificate.



photo by Roger Brimmer

Nancy Bingham (left) receives plaque for most Outstanding Code Participation. Nancy is talking to awardee Hank Schwoob and Brenda Collins, who presented the awards.



Hank Schwoob presenting to the students at Loyola Elementary School in Los Altos.

photo by Sue Bowling



Ed Stanton speaks at Crittenden Middle School using a demonstration space suit provided by Code DX.

photo by Tom Trower

Ames Activities

Native American teacher workshop is huge success

Students in the 'Four Corners' area of the U.S. (New Mexico, Arizona, Colorado and Utah) have a very exciting year upcoming. Twenty teachers of K-12 students on Native American reservations spent two jam-packed weeks at Ames learning about everything from wind tunnels to the exploration of the Moon and Mars, from remote sensing to exobiology. As one of the teachers said, "When we teach teachers, we reach many times that number of students."

The visit was part of an outreach program known as the NASA Educational Workshops (NEW). Each summer, NASA centers host NEW groups to provide teachers with information about NASA programs and work with them to incorporate NASA educational materials into their classrooms. The Ames workshop is unique in that it focuses on teachers from rural and Native American schools. Among the tribes represented at the workshop were the Hopi, Navajo, Shoshone and Pima. Liza Alderete of the External Affairs Office organized and hosted the event. Sharon Miya, the Utah State Science Teacher of the Year, acted as the educator facilitator for the participants.

The teachers appreciated the opportunity to learn directly from the scientists and

engineers.

"This is the first time someone has explained the ozone depletion issue so clearly," said Rich Stoner, referring to a presentation by Dr. Jay Skiles of the Ecosystem Science

teachers also met with other Ames scientists and project managers including Dr. David Morrison, Dr. Chris McKay, Dr. David Koch and Scott Sandford. The educators also worked on projects to determine how to use NASA aeronautics facilities to make modifications to aircraft with the guidance of Craig Hange, Chris Sweeney, Loran Haworth and Roxana Greenman.

Many teachers from rural areas do not have access to the Web and thus found the Ames educational CD-ROMs, Exploring Aeronautics, Lunar Prospector and Mars Virtual Exploration, to be valuable resources to make science and aeronautics come alive in their classrooms.

Field trips to nearby sites, including Lick Observatory and the U.S. Geological Survey, also provided a wealth of information the teachers can take back with them. The two-week workshop culminated in a formal banquet. Mike Liu, Chairman of the Native American Advisory Committee, chose the guest speaker Dovie Thomason, a Native American storyteller from Virginia. Her stories incorporated analytical science

concepts into the voices of Indian ancestors.



photo by Dominic Hart

NASA Education Workshop Participants:

Back row, from left to right: Tom Clausen, Liza Alderete, Alan Ball, Brian Hawkins, Tom Gates, Peggy Donahe, Lynda Matheson, Rich Stoner, Phil Lair, Jim Hawk and Sharon Miya. Front row, from left to right: Rae Crooke, Idella Poocha, Cheryl Dennison, Diana Mike, Sharon Maki, Pauline Villegas, Mildred Nayatewa, Yvonne Haven, Tina Aberta, Emma Joe, Angela Martinez, Doris Aitson, and Cheryl Lowden.

and Technology Branch (SGE). The teachers simulated some of Dr. Skile's work on the effect of ultraviolet (UV) light exposure on plants, by growing their own plants under different lighting conditions. The

BY LIZA ALDERETE 



'NASA Afterburners' finish proudly

On Sunday, July 12, the 'NASA Afterburners' relay team sped around the San Francisco Marathon course taking just over 3 1/2 hours to complete the 26.2 miles. Tom Trower began the relay, carrying the baton over the Golden Gate Bridge to Janice Vass at the Marina Green. Janice ran the Embarcadero handing off to Rick McIlmoil who powered over the infamous Hayes Street Hill. Taking the next pass in Golden Gate Park, John Arvesen sprinted to the Pacific and back, before captain Lisa Marie Gonzales raced to the finish line in Kesar Stadium.

Here is a triumphant photo of Ames' relay team at the San Francisco Marathon. From left to right: Janice Vass, Rick McIlmoil, John Arvesen, Lisa Marie Gonzales and Tom Trower.

Briefs

Efforts to recover SOHO spacecraft continue

NASA and European Space Agency (ESA) engineers, reasoning that over the next two to three months the spacecraft's solar panels will increasingly face the Sun and generate power, are continuing their efforts to contact the Solar and Heliospheric Observatory (SOHO) spacecraft.

Meanwhile, the NASA/ESA investigation board concentrates its inquiry on three errors that appear to have led to the interruption of communications with SOHO on June 24. Officials remain hopeful that, based on ESA's successful recovery of the Olympus spacecraft after four weeks under similar conditions in 1991, recovery of SOHO may be possible.

NASA produces third volume of "Exploring the Unknown"

NASA unveiled, on July 16, "Exploring the Unknown: Selected Documents in the History of the U.S. Civil Space Program, Volume 3: Using Space," edited by John M. Logsdon, with Roger D. Launius, David H. Onkst and Steven J. Garber.

"Exploring the Unknown" is an essential reference series for anyone interested in the history of the U.S. civil space program and its development.

The first two volumes of the "Exploring the Universe" series are: Organizing for Exploration and External Relationships. Three future volumes will trace the evolution of space transportation, human space flight and space science.

NASA satellite sheds new light on the La Nina phenomenon

Research scientists using data from the recently launched Tropical Rainfall Measuring Mission (TRMM) satellite, a joint U.S./Japanese mission, are shedding new light on the phenomenon known as La Nina. TRMM research team members have successfully retrieved sea-surface temperature data from the TRMM Microwave Imager (TMI) instrument on board the spacecraft.

This temperature data is giving scientists new insight into the complex evolution of the La Nina event. The TMI is the only spaceborne microwave instrument observing sea-surface temperature in the tropics. The images show changes in sea-surface temperature and ocean current movement as well as the dissipation of El Nino. While it is too early to draw definite conclusions, the results to date appear to confirm the onset of La Nina-type conditions.

Ames employee named to participate in NASA Administrator's 1998-99 Fellowship Program

Five NASA employees, including one from Ames, recently were named to participate in the 1998-99 NASA Administrator's Fellowship Program. The program aims to enhance the professional development of mid-career science, mathematics and engineering faculty at Historically Black Colleges and Universities, Hispanic-serving Institutions and Tribal Colleges and Institutions.

The program also provides an opportunity for NASA employees to teach and conduct research at minority colleges and universities. This helps the universities become better qualified to assist NASA in its research and development mission.

The recipients are: Diane Farrar, NASA Ames; Waldo Rodriguez, Norfolk State University, Norfolk, VA; Sheila Nash-Stevenson, NASA Marshall Space Flight Center, Huntsville, AL; Felix Miranda, NASA Lewis Research Center, Cleveland, OH; Dexter Johnson, Lewis Research Center; and Orlando Melendez, NASA Kennedy Space Center, FL.

The fellowship program is a two-part competitive program, with one fellowship being awarded this year to an individual from outside the Agency, and five to NASA employees. Dr. Waldo Rodriguez, the recipient from Norfolk State University, is a professor of chemistry in the School of Health Related Professions and Natural Sciences. He will conduct research at NASA's Langley Research Center in Hampton, VA.

The five NASA employees who were awarded fellowships will have the opportunity to serve as exchange teachers, scientists, engineers and/or managers at Alabama A&M University in Huntsville; the University of Puerto Rico at both Humacao and Mayaguez; Florida A&M University in Tallahassee; and the Institute of American Indian Art in Santa Fe, NM, for a period of one to three academic semesters. They will share their knowledge of the Agency's scientific and technical programs and lend real-world experiences to the teaching and research process.

The program, scheduled to begin in August 1998 and run through May 2000, will be administered by the National Research Council. Information on the upcoming 1999-2001 competition can be obtained by contacting Lois Hobson in the Fellowship Office of the National Research Council, 2101 Constitution Ave., N.W.,

Washington, DC, 20418, Phone: 202/334-2872. The National Research Council is the principal operating agency of the National Academy of Sciences and the National Academy of Engineering and the Institute of Medicine. It is a private, non-profit institution that provides science and technology advice under a congressional charter.

Appointment of Chief Scientist

Dr. Stephanie Langhoff has returned to Ames after a very successful year as a NASA candidate in the Massachusetts Institute of Technology (MIT) Sloan Fellowship program.

Upon her return to the Center, Dr. Langhoff accepted the position of Chief Scientist in the Office of the Director.

In her new position, Dr. Langhoff is serving as a key advisor to the Office of the Director and as a member of the Center's Board of Directors. She is providing intellectual leadership to internal scientific programs at Ames, including those of the Basic Research Council, the Director's Discretionary Fund, and the Ames Fellow and Associate Fellow programs. Dr. Langhoff also represents the Center's scientific interests both internally to the Director's office and other senior managers at the Center, and externally to scientific institutions and professional organizations. Further, she works with the Deputy Director for Research to ensure and enhance the quality of the R&T programs at Ames.

Prior to her developmental experience at MIT, Dr. Langhoff served as Chief of Ames' Computational Chemistry Branch where her technical expertise and management skills proved exemplary.

Dr. Langhoff's office is located in Bldg. N-239, Room 206. Her extension remains 4-6213.

Employee Recognition

CTAS Software wins top award

The Ames-developed Center TRACON Automation System (CTAS) software has been selected as a winner of NASA's 1998 Software of the Year award.

Lee B. Holcomb, NASA Chief Information Officer, and Dr. Daniel R. Mulville, NASA Chief Engineer and Chair of NASA's Inventions and Contributions Board, selected the winners. The award is given annually by the Inventions and Contributions Board to NASA-developed software that has significantly enhanced the Agency's performance of its mission and helped American industry maintain its world-class technology status.

"This is a very prestigious award for our Center and I, along with the NASA Administrator, sincerely appreciate the efforts from each of the contributors," said Ames Director Dr. Henry McDonald.

The Center TRACON Automation System software is a set of three software tools for managing air traffic control systems at major airports. Designed to optimize flight operations, the software analyzes and predicts aircraft paths, creating visual representations of the flow of arriving traffic. It also provides controllers with up-to-the-second advisories of information to pass on to pilots that will reduce time between landings to the minimum possible.

The software has been integrated into the existing radar system at the Dallas/Ft. Worth Airport. Software displays in the control room supplement the manual air traffic control system. Use of the program saves an average of two minutes per flight, in turn saving money for the airlines and passengers. The Federal Aviation Administration has chosen the Center TRACON Automation System for immediate implementation into all major airports and estimates its use could save airports as much as \$800 million annually.

The Center TRACON Automation System software was written by Michele Eshow and a team of 22 other Ames employees. Contributors included:

Thomas J. Davis
Gregory L. Wong
John E. Robinson, III
Douglas R. Isaacson
Karen Y. Tung
Paul H. Decker
William W. Thigpen
Michael C. Pruznick
Darrell L. Wooten
Mayank B. Patel
Danny D. Chiu
Liang L. Chen
George J. Soler
Tsung-Chou Fang
Thomas Kilsdonk
Susan E. Hinton

Xavier Bouyssounouse
Mark D. Slater
Philippe Stassart
Joseph Walton
Zheng Chen
Joseph R. Cisek

In addition, Ames' Overflow, Hypgen and Chimera Grid Tools for CFD Analysis received honorable mention in the same contest. Contributors included:

Pieter G. Buning
Joseph L. Steger
Dennis C. Jespersen
Thomas H. Pulliam
William M. Chan
Steven M. Nash
Stuart E. Rogers
Jeffrey P. Slotnick
Steven E. Krist
Kevin J. Renze
George Huang
Reynaldo J. Gomez
Timothy J. Barth
Douglas L. Sondak
Jasim U. Ahmad
Shigeru Obayaski
Yehia M. Rizk
Merritt H. Smith
Christopher A. Atwood
Ing-Tsau Chiu
M. Jehed Djomehri
Robert L. Meakin
Steven J. Parks
James R. Taft
Teng-Hua Shieh
Ferhat F. Hatay

Tempest, a computer program that controls Space Shuttle science experiments, was also chosen as a winner of NASA's 1998 Software of the Year Award. Tempest was written by Maria Babula, Lisa Lambert, Joseph Ponyik and David York of NASA Lewis Research Center, Cleveland, OH.

Tempest was originally developed to support the science experiments on the Space Shuttle and Space Station. The commercial quality software is fully documented, installs simply, and uses standard World Wide Web browsers to let users operate the experiments. Tempest is considered to be a breakthrough and enabling technology, which has spawned new markets and will continue to do so. A study performed for a NASA commercial technology center estimated the commercial market for Web-embedded remote control mechanisms could reach \$100 billion over the next decade.

NASA will grant the awards during a special ceremony at the Technology 2008 Conference Nov. 3-5 in Boston, MA.

BY MICHAEL MEWHINNEY



Ames employees receive CFSD award



photo by Tom Trower

Standing, left to right: Patricia Powell and Mary Kenny accepting the award for Ray Schuler; seated: Dee Shallenberger.

This summer, Code JH, Ames' student programs office, was instrumental in employing two high school senior students from the California School for the Deaf (CSFD). Both students were very successful in their positions; each will be attending Rochester Institute of Technology as computer science majors in the Fall.

Ames is the first institution to hire students in a technical field from CSFD. The Center was selected by the students to receive the 1998 Employer of the Year award. Ames supervisors, who also received awards for excellent mentorship, were Patricia Powell, Dee Shallenberger and Ray Schuler, civil/structural group lead for Code FEF. Mary Kenny accepted the award on Schuler's behalf. The students praised Ames for the high level of work provided, the support they received, and how much they were able to learn.

IV&V sails through ISO Pre-audit

NASA's Software Independent Verification and Validation (IV&V) facility in Fairmont, West Virginia was established to ensure that cost effectiveness and safety are top priorities in current and future NASA programs. Consolidating software IV&V activities into a single organization enhances the commitment to reducing costs while providing an independent analysis of mission software to improve safety. As of Oct. 1995, the IV&V became a part of the Center of Excellence for Information Technology (CoE-IT) at Ames.

IV&V provides independent verification and validation and assessment services, and manages the products of the Office of Safety and Mission Assurance software program. IV&V personnel assist customers with developing software within initial cost estimates and on schedule, while achieving and maintaining high quality. All IV&V-provided services and products are designed to be applied at any phase of the software development life cycle.

Currently, IV&V is undergoing preparations for ISO certification. What does ISO mean and how is it achieved? Simply, the International Organization for Standardization (ISO) is a worldwide federation of national standards bodies from some 100 countries, one from each nation. ISO is a non-governmental organization established in 1947. Its mission is to promote the development of standardization and related activities in the world with a view to facilitating the international exchange of goods and services, and developing cooperation in the spheres of intellectual, scientific, technological, and economic activity. ISO's work results in international agreements, which are then published as international standards.

International standardization began in the electrotechnical field with the creation of the International Electrotechnical Commission (IEC) in 1906. Pioneering work in other fields was carried out by the International Federation of the National Standardizing Associations (ISA), established in 1926. The emphasis within ISA was on mechanical engineering.

ISA's activities ceased in 1942, but following WWII, delegates from 25 countries decided to create a new international organization "the object of which would be to facilitate the international coordination and unification of industrial standards." The new organization, ISO, was officially launched in Feb. 1947; it published its first standard in 1951.

ISO 9000 is a set of five universal standards for a quality assurance system that is accepted around the world. Currently, 90

countries have adopted ISO 9000 as their national standard. When a product or service is purchased from a company registered to the appropriate ISO 9000 standard, it is assured that the quality will be as expected.

The most comprehensive of standards is ISO 9001. It applies to industries involved in the design and development, manufacturing, installation and servicing of products or services. The standards apply uniformly to companies — in any industry and of any size.

To assist NASA in its certification process, the agency selected a third-party registrar, Det Norske Veritas (DNV) Certification, Inc., Houston, Texas to provide detailed compliance audits of selected field centers. This selection was a key milestone in moving towards Administrator Goldin's goal of having the agency ISO 9001 certified by Sept. 1999.

In Dec. 1995, NASA began the process of transitioning its quality management system requirements to the ISO 9000 family of standards. At IV&V, the process to gain ISO certification for its quality management system began in April 1997. The process is scheduled for completion by Oct. 1998.

What does it take to get ISO 9000 standard certification? It requires that IV&V do three things: document what it does, do what it documents, and provide objective evidence to support the documentation. It also requires a review of the process so that it can be updated to reflect improvements in procedures. In addition, IV&V intends to enhance operational strategies to achieve ISO 9001 certification for products and services provided to customers.

The IV&V ISO 9001 implementation mission is to document the facility's quality management system in accordance with ISO 9001 standards. The documentation will reflect the dynamic and responsive nature of IV&V's interaction with a variety of customers, and yet be disciplined and consistent so as to provide the best opportunity for continued success. It is the goal of IV&V to attain ISO 9001 certification by Oct. 1998, and to maintain it into the future as part of the overall IV&V strategic plan.

Collateral objectives include: the streamlining of systems; eliminating duplication of effort; simplifying and organizing documentation; improving management



processes; optimizing consistency of product; strengthening process focus; and creating a continuously improving environment. In addition, it is IV&V management policy to apply the ISO philosophy to direct infrastructure support.

In early June, IV&V successfully completed a pre-assessment audit. The purpose of such an audit is early problem identification and interpretation resolution in preparation for the certification audit. Although this audit is optional, it provides the opportunity to resolve issues and reduce follow-up costs. During the audit, DNV identified only 21 observations, the majority of which are minor non-conformities, with the remainder requiring only cosmetic changes to documentation.

IV&V completed all necessary readiness steps ahead of schedule to meet DNV expectations for the pre-assessment audit. To that end, the IV&V Quality Manual was complete and reviewed by DNV; 100% of the required ISO procedures were documented and implemented; management meetings were held and documented; internal audits were performed; and corrective action was applied to identified non-conformances.

The DNV auditor reported strengths at IV&V with respect to the Quality Manual and system-level procedures documentation. The Quality Manual was said to be clearly and concisely written. It was praised for appropriately focusing on "what" is to be done and leaving "how" to referenced procedures. The systems-level procedures were said to be clearly written with appropriate use of keyed flow charts and tables to ease understanding.

The next challenge for IV&V is to implement corrective action measures as a result of the pre-assessment audit and prepare for the certification audit. With continued management commitment and staff dedication, IV&V anticipates full certification by the October target.

BY SIAMAK YASSINI



Ames Activities

Street fair sizzles!

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Jose, the Lasya (Indian) academy, the Floridico dance troupe, Polynesian hula dancers, and members of Ames' own ball-room dance club. Reggae, new age, jazz, country/western and classical rock bands regaled the throngs with their musical offerings. Singers warbled tunes that ranged from country, to blues, to Michael Jackson (glove not included!). A magician, Mariachi group, Taiko drummers, and a delightful talent show from the Child Care Center kids completed the attractions.

This year's Street Fair was sponsored by Ames' Multicultural Leadership Council (MLC) to spread the event's message of "strength through diversity." After a six-year hiatus, the MLC decided to bring the Street Fair back to re-energize the Ames workforce around its program of multiculturalism, diversity and respect for all. Generous support for the Street Fair was provided by the Ames Exchange Council which helped to underwrite food and entertainment costs. The event would not have been possible without the whole-hearted support and encouragement of the Ames Director's Office, the Equal Employment Opportunity

Office, a host of volunteers and all of the advisory committees at the Center.

The Street Fair provided a real opportunity to observe the enthusiasm and spirit of volunteerism at work at the Center. Publicity chair, Daryl Wong, and clean-up chair, Mary Bravo, were supported by eager teams of helpers. Additional support was provided by the ham radio club, the nurses from the Ames Health Unit and by representatives from the Center's safety and security offices. The Street Fair project was co-chaired by Bravo, Joe Shields, and Mary Buford Howard, all of whom worked tirelessly for many months to ensure the success of the undertaking.

The MLC thanks everyone for their contributions and support which constitute the substance and essence of the fair. They ask that everyone at the Center get behind their message of strength through multiculturalism and diversity. And watch for the next Street Fair coming to this Center soon. With your support, hopefully before it's scheduled 6-year cycle in 2004!

BY DAVID MORSE



photo by Roger Brimmer

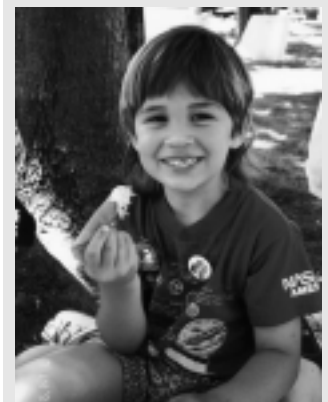
Participants waiting in line at the Indian tacos booth.



photo by

Roger Brimmer

The Marachi Guachinango band.



Four-year old Henry Terlep, son of Astrid Terlep, enjoys the taquitos in the shade.



photo by Roger Brimmer

Classical Indian dancer from the Lasya Academy of Dance.



photo by Roger Brimmer

Proud parents of children participating in the talent show.



Selecting condiments for the fabulous assortment of ethnic foods.



photo by Roger Brimmer

Ames Child Care Center's four to five-year olds performing in their talent show.

Community Activities

Los Altos Art & Wine Festival: A hit with the kids!

When NASA was founded in 1958, it was charged with the task of effecting the widest possible public dissemination of its findings.

As one aspect of meeting this task, Ames participates each year in a number of offsite public events.

Ames is halfway through the summer season of these events, having participated at the Watsonville Airshow in May, the Sunnyvale Art and Wine festival in June, and most recently the Los Altos Art and Wine festival on July 11 and 12. While Ames has become an annual participant at the Watsonville and Sunnyvale events, this was the Center's first appearance at Los Altos. Because of the small space available in Los Altos and our location in the Kids Zone, a new approach to the display was tried. Rather than focusing on displays of selected Ames programs as is usually done, Ames exhibits were focused around hands-on activities for children, retaining a few displays for the parents.

"Most definitely yes! I had a lot of fun," said one of the Ames employees, when asked, "would you volunteer in the future for an event like this one?"

Sixteen Ames employees, representing twelve codes, volunteered their time to represent NASA at the Los Altos Art & Wine Festival. Another two volunteers were from the community. During their 3 1/2 hour shifts, volunteers facilitated hands-on activities for the kids and talked with people who stopped by.

The NASA booth was designed to provide an opportunity for young people to learn about NASA while doing space-related activities. Children of all ages constructed Lunar Prospector replicas with straws and marshmallows, built a NASA Space Shuttle glider, and practiced their skills at Moon-rock archeology, mining for chocolate chips in chocolate chip cookies. Lisa Marie Gonzales, of the Office of External Affairs (Code DX), selected and coordinated the activities.

What did the volunteers like best about working in the NASA booth?

"The other volunteers were great and the children were fun to work with," said Becky Brondos, Human Resources (Code JH).

"I really enjoy meeting the people and telling them a little about NASA," said Ruth Olsen, Human Resources (Code JH).

"The best part was the people's reaction . . . I received a lot of thanks for just being there," said Nancy Johnson, Information



Jane Cordell (Code FE) shows a fair attendee how to replicate a model of the Lunar Prospector.

Systems (Code IH).

"The interest shown by the kids and their parents. It was a great day," said Jane Cordell, Systems Engineering Division (Code FE).

"I felt that all who entered gained something. Removing the mystique about NASA is a good thing," said Sharon Bay, Space Projects division (Code SF).

Jeff Cross, exhibits and events coordinator in the External Affairs office, Code DX, is already planning the next event -- the Mountain View Art and Wine Festival, slated for September 5 and 6.

"Attending these festivals is a personal way for Ames to let the community know what goes on here. You might say it is our report to the stockholders," Cross said. "One of the most rewarding aspects of working these events is the positive reaction you get from the public. They are fascinated by and eager to see what NASA is doing. It always leaves me feeling really good about being able to work here at Ames."

If you are interested in participating in events like these, please call the author, manager of the Team NASA volunteer program, at ext. 4-0494, or email her at: lburkart@mail.arc.nasa.gov

BY LORI BURKART



photos by Lisa Marie Gonzales

Standing room only as kids built NASA-related models.



Trying to build Space Shuttle gliders is easier than it looks!



Decked out in NASA clothing, Ruth Olsen (Code JH) fielded NASA questions and mentored young people in the hands-on activities.

Ames develops valuable "Fire Risk Map" for Brazil

While El Nino was soaking Northern California, causing mud slides and floods, severe drought was reducing rainfall in the rain forests of Brazil by such a significant amount that the hazards of devastating fires threaten an area estimated to equal the size of California over the next several months.

With attention in Brazil turning to these alarming fire dangers, Code SGE, the Ecosystem Science and Technology branch, researchers led by Christopher Potter, were collaborating with scientists at the Woods Hole Research Center and the Brazilian Space Agency to produce a new map of pending fire risk for the entire Brazilian Amazon region. The mapping application shows that approximately 400,000 square kilometers of intact forest may become highly susceptible to fire during the 1998 burning season (June to November).

This fire risk map, produced as part of the joint "RisQue98" project, was presented in a public hearing in the Chamber of the Brazilian House of Deputies this spring and was also published in Brazilian national newspapers. The purpose of the map is to provide an advanced warning so that farmers, ranchers, loggers, and government agencies can implement measures to reduce the spread of accidental fire where the risk is particularly high.

"The combination of drought and logging has a deadly effect on tropical rain forests, especially when the accidental spread of fires from nearby clearings becomes part of the equation," said Potter. "Protection of timber, wildlife, and of course, people of the Amazon can all benefit from advanced warning of the areas most at risk."

The drought has caused a rise in the normal fire risk of the area in multiple ways. A normal rainy season "greens up" the rain

forest to the point that it remains somewhat damp and fire-resistant throughout the dry season. The lack of rain this season is evident in the low moisture level of the soils, as well as drier trees which form the

rain forest canopy. These trees will drop a higher percentage of their leaves because of this dryness, therefore letting more sunlight into the floor of the rain forest, compounding the dryness and flammability issues.

Brazil's weather service provided the NASA Ames/Woods Hole Research Center with the temperature and rain-

fall statistics since early 1997. The team built a composite Fire Risk Map based on this input, along with computer model predictions of moisture content of the soil, evapotranspiration, logging zone areas, fire prevention zones, land use and forest zones.

The latest climate predictions in Brazil are for continued severe drought. Large areas of forest on parched soils, which haven't been recharged with new rainwater, are becoming vulnerable to the incursion of accidental fires. The possibility for an ecological and social catastrophe is real and immediate over vast areas. Advanced knowledge of areas at risk should serve Brazil's interest the way California used the advanced warning of this last El Nino season. Early awareness can lead to measures to protect or at least minimize the impacts of natural disasters.

BY BETSY CARTER

Applications for tuition assistance

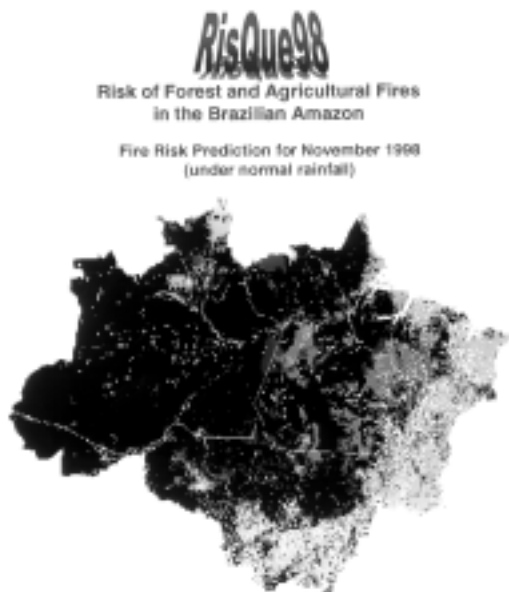
Applications for Tuition Assistance at the Ames Child Care Center (ACCC) for the period July 26 through January 23, 1999, are now being accepted. Application forms can be obtained from Gabrielle Babin in the ACCC (Building T20-D, ext 4-4184). Please note that income verification must be submitted with the application. Applications are due by COB July 28 to the ACCC office.

The Ames Child Care Center (ACCC) provides full-time and part-time quality day care for the children of Ames civil service employees and on-site contractors. The ACCC is open from 7:00 a.m. to 6:00 p.m., Monday through Friday, and serves children aged 6 weeks to 5 1/2 years.

The philosophy at the Ames Child Care Center is based on standards set by the National Association for the Education of Young Children (NAEYC).

The program is based on developmentally appropriate practices. All classrooms are "child-oriented" rather than "teacher-oriented." The environment allows the child the opportunity to make choices and decisions concerning his or her actions. The teachers and assistants interact with the children by encouraging creative thought and assisting the child in developing his or her own problem solving strategies. The teachers prepare an environment that meets the child's social, emotional, intellectual, and physical needs and that enable the child to develop positive self concepts, the ability to get along well with others, and a joy of learning.

For a tuition assistance application, tours, or waiting list information, please contact Gabrielle Babin at ext. 4-4184 or mail to: gbabin@mail.arc.nasa.gov.



Age-related differences study to be conducted

Researchers in the Musculoskeletal Biomechanics Laboratory are recruiting women runners for a study currently underway entitled "Age-Related Differences in Physical Activity Level and Bone Density in Women". If you are a woman runner 25-35 years old, or 60 or older and running is your primary form of exercise the lab would like you to volunteer. The lab is located at Ames in N-239, Room 178. The website URL is: <http://george.arc.nasa.gov/~rwhalen>

The laboratory has developed a device to monitor activity during a normal day which was previously tested at Ames during the past 1-2 years. The main focus of research is to determine how musculoskeletal loading, caused by normal activity, such as walking, stair climbing, etc., affects bone density. Particular to this study is how aging and physical activity relate to bone density.

Initially, a questionnaire to determine musculoskeletal history is used to assess applicant suitability for this study. After screening in this manner, an activity questionnaire is used to determine a person's previous yearly activity pattern. The first phase of testing requires a visit to Bldg. N-239 to determine gait patterns for walking and running over a force plate mounted in a sidewalk. This may take up to one hour and be scheduled over a weekend, or other convenient time. The second part of testing involves wearing several devices that will monitor activity during the day, including our experimental device. For this phase of testing, participants will need to visit the laboratory three times.

An initial checkout on our system is performed in our lab and will take about 30 minutes. All device operation will then be explained and given to participants for wearing in the fanny pack provided, or on your waist during your day (i.e. from when you get dressed in the morning until you retire in the evening). You will be asked to wear all devices for five continuous days starting on a Wednesday morning and continuing to the following Sunday evening. At the end of the five days you will need to return to our lab for a final checkout. The final part of testing involves a low dosage x-ray of your heel bone using a commercial bone densitometry machine, which is currently awaiting Human Research Board approval for this phase of testing, which will take about 10 minutes.

Consent is required for all study partici-

pants, and you may withdraw from the study at any time for any reason, although it is hoped that you continue with all phases of testing.

The researchers encourage retired Ames employees and/or spouses, civil servant and contractors welcome, as well as current employees to volunteer for this study. Volunteers are not limited to on-site personnel, so please encourage your friends and/or spouses who live within a short driving distance from Ames to participate. Please call the author at ext. 4-3440 or email at: sbowley@mail.arc.nasa.gov to volunteer for this study or for further information.

BY SUE BOWLEY



Errata

Due to a typographical error in the July 10 issue of the Astrogram, a photo caption inadvertently misidentified the GALA guest speaker Ms. Roberta Achtenberg. The Astrogram staff sincerely apologizes for this unfortunate mistake and for any inconvenience or concerns it may have caused.

Dr. Seymour Stein dies

Dr. Seymour "Sy" Stein died of heart failure on June 21. Stein joined the Ames staff in 1964.

As Chief of the Medical Office, he initiated health programs, established safety procedures, and provided consultation on medical problems involving research on human subjects. Dr. Stein was a key player in a unique experiment conducted at Ames in which an elderly man with a bullet in his brain was treated on the 5 degree of freedom centrifuge. In addition to contributing to the review and approval process, Dr. Stein utilized his neurosurgery background to create a "brain" made of jello to simulate the actual consistency of the human brain which was then used in the preliminary tests to validate the feasibility of the treatment.

Dr. Stein was actively involved in numerous NASA-related programs for young people. He organized and directed the California Youth Science Congress, was President (3 years) of the Santa Clara Science Fair, and judged for countless student science fairs and symposiums.

No memorial services are planned. He is survived by his son Avi.



Dr. Seymour Stein

Events & Classifieds

Calendar

Jetstream Toastmasters, Mondays, 12 noon to 1 p.m., N-269/Rm. 179. Guests welcome. POC: Jenny Kahn at ext. 4-6987 or Pam Walatka at ext. 4-4461.

Ames Child Care Center Board of Directors Meeting, Tuesdays, 12 noon to 1 p.m., N-213/Rm. 220. POC: Lisa Reid at ext. 4-2260.

Native American Advisory Committee Meeting, July 28, 12 noon to 1 p.m., Ames Café. POC: Mike Liu at ext. 4-1132.

Ames Contractor Council Meeting, Aug 5, 11 a.m., N-200/Comm. Rm. POC: Greg Marshall at ext. 4-4673.

Hispanic Advisory Committee for Employees, Aug 6, 11:45 a.m. to 12:30 p.m., N-239/Rm. 177. POC: Carlos Torrez at ext. 4-5797.

Environmental, Health & Safety Monthly Information Forum, Aug 6, 8:30 a.m. to 9:30 a.m., Bldg. 19/Rm. 1078. POC: Linda Vrabel at ext. 4-0924.

Ames African American Advisory Group Meeting, Aug 6, 11:30 a.m. to 12:30 p.m., N-241/Rm. 237. POC: Antoinette Price at ext. 4-4270 and Mary Buford Howard at ext. 4-5095.

Nat'l Association of Retired Federal Employees, S.J. Chapter #50, Meeting, Aug 7, at the Elk's Club, 44 W. Alma Avenue, San Jose. Social hour: 10:30 a.m. Program & business mtg. follow lunch at 11:30 a.m. POCs: Mrs. Leona Peery, President, (650) 967-9418 or Earl Keener, Public Relations, (408) 241-4459.

Professional Administrative Council (PAC) Meeting, Aug 13, 10:30 a.m. to 11:30 a.m., N-244/Rm. 103. POC: Janette Rocha, ext. 4-3371.

Ames Sailing Club Meeting, Aug 13, 11:30 a.m. to 1 p.m., N-262/Rm. 100. POC: Greg Sherwood at ext. 4-0429.

Ames Multicultural Leadership Council Meeting, Aug 19, 11:30 a.m. to 1 p.m., Galileo Rm./Ames Café. POC: David Morse at ext. 4-4724 or Sheila Johnson at ext. 4-5054.

NFFE Local 997 Union General Meeting, Aug 19, 11:30 a.m. to 12:30 p.m., Bldg. 19/Rm. 1040. POC: Marianne Mosher at ext. 4-4055.

Ames Amateur Radio Club, Aug 20, 12 noon, N-260/conf. rm. POC: Walt Miller, AJ6T at ext. 4-4558.

Ames Asian American Pacific Islander Advisory Group Meeting, Aug 20, 11:30 a.m. to 1 p.m., N-241/Rm. B2. POC: Daryl Wong at ext. 4-6889 or Brett Vu at ext. 4-0911.

Ames Classifieds

Ads for the next issue should be sent to astrogram@mail.arc.nasa.gov by the Monday following publication of the present issue and must be resubmitted for each issue.

Ads must involve personal needs or items; no commercial/third-party ads and will run on space-available basis only. First-time ads are given priority. Ads must include home phone numbers; however, Ames extensions will be accepted for carpool and lost and found ads only.

Housing

For rent: 4 bd/2ba home on quiet, pleasant court in Milpitas. Fireplace, large deck/back yard, gardener. Easy access to H680, H880. \$1,500/mo. + deposit. Doug (408) 945-6364.

Share 2 bd/1ba house in Mtn View on Escuela Ave. No pets, N/S only. \$540/mo + utilities & deposit. Available 9/1. Bruce (650) 969-4118.

For sale: Campbell PUD, 3 bd/2.5ba, 1465 sqft. Lots of extras! Wonderful location. Motivated seller. Contact Hope Wilden (408) 871-8479 for more details and a tour! Location: 502 Latimer Circle, Campbell.

Transportation

'83 Station Wagon 245 Volvo diesel, auto, 197K mi. 3K mis on new Mercedes engine, new radiator, battery, starter, tires, many other parts. All records available. Metallic, leather seats, AM/FM cass. stereo. With some body damage after collision, but absolutely drivable. DMV inspection O.K. Extremely safe, reliable family car with good mileage. Avail. Aug., \$1,500. Joseph (650) 966-9692, home, eves.

'84 Oldsmobile Toronado, 40K mis, (papers), immaculate white paint, orig. interior, fully loaded, power doors, etc. \$8,000 or B/O. Joe (415) 469-9945.

'89 Honda Civic CRX Si Hatchback, 4 cyl, 5 spd, am/fm/cassette stereo, Sliding sun roof, Alloy wheels. \$7,800 or B/O. Call (408) 362-9114.

'90 Ford Bronco II, 2dr, tan, XLT, A/C, automatic, cassette, roof rack, pwr windows, crs cntrl, exc. cond., orig. owner, 89K, \$4,500. Paul (408) 919-2933.

'91 Honda Accord DX, 4 dr, 183K mis by orig. owner, auto, brown w/beige interior. Very gd. cond. \$3,500 or B/O. Call (707) 747-6174.

'91 Mazda 323 Hatchback, 51K mis, auto trans, A/C, new tires, exc. cond., \$3,500. Call (650) 965-3694.

'97 Triumph 509 Speed Triple, 13K touring miles, orange, fresh service, new tires, extras, Triumph tank bag, tank protector, fly screen, fender extension, \$7,500. Denny (408) 395-2393.

Miscellaneous

Free - cast iron, floor-standing laundry sink. You pick up. Call (408) 295-2160.

Two tickets for mountain biking or golfing at Northstar. Biking including bike rental and multi-ride bike lift ticket (retail \$106). Golf is for 9/14-10/31. \$60. Call (408) 274-9219.

AA airline roundtrip tickets to anywhere American Airlines flies in 48 States. \$310 includes taxes and pfc. Complete trip by August. Bob (408) 253-3903.

Two white, 'Audio Source' surround-sound speakers. \$35/pr; one black, 'Boston Acoustics' center channel surround speaker- two mids and a tweeter, w/video shielding, \$50. Call (408) 295-2160.

Sears Lifestyler multi-function gym. Folds up for efficient storage. Sears Lifestyler CardioFit total body motion low impact arm/leg/back exerciser. Similar to HealthRider. \$100 ea. or purchase both for \$175. Mac (408) 253-3027.

Wanted: 3000 to 5000 watt portable generator. Brian (650) 940-1673 or sales@landsurfing.com

Motorcycle Helmet, Arai Signet, black, small, never used, \$150. Guy (408) 395-3831.

Colonial living room set, white fabric/cherry. Sofa, loveseat, chair, coffee table, end table. \$400. Call (408) 272-5003.

Pair of 49er tickets, sec. 53; 8/23 Miami pre-season, \$35 ea. Call (510) 656-7654.

Two ea. Yakima tandem bike racks, 1 ea. Compact freezer, 24"x33"x27", make offer. Randy (408) 734-9550.

Sale or trade, your choice. Thousand Trails/NACO Campground membership. Dues up to date. All reasonable offers considered. Hank (408) 923-2231.

Beautiful exotic bird: Sun Conure for sale. Very colorful mid-size parrot. Handfed, healthy and very tame. 7 years old. \$580 includes AE (Animal Environment) top of the line designer cage. Michael (650) 969-7505.

Child's REI sleeping bag, exc. cond. \$35 or B/O. Child's Billabong wetsuit, size 12, \$40 or B/O. Call (831) 423-5824.

Black metal bunk bed, top-single. Bottom-double futon. Converts to sofa. Exc. cond. \$225 or B/O (\$400 new). Call (831) 423-5824.

PENT 90MHz system, Micronics motherboard, 512K cache, 4 ISA slots, 3 PCI (w/one ISA/PCI shared); 8Mb FPM 70ns RAM, expandable to 192Mb; 540 Mb Maxtor IDE drive, 8.5ms; Mediavision ProAudio Spectrum sound card w/SCSI CD connector; SONY (bus) 2X CD-Drive; ATI Winturbo SVGA video card with 2Mb DRAM; 1.44 Floppy; 14.4 internal modem; Orig. AT-style (full) desktop case, serial mouse, 101-keyboard, & manuals for m/b and video. Monitor & S/W not included. \$280. Call (510) 278-260.

Brown leather desk pad, 20" x 36", exc. cond. Paid \$63, sell for \$30. Call (650) 851-5290 after 6 pm.

Beautiful African Zebra Finch for sale, \$8 each. Orange beak and legs. Mary (408) 947-7179.

The Lake Alpine Nordic Ski Patrol is looking for donations of used furniture. We will pickup. Tax exemption numbers available. Randy (408) 734-9550.

49er tickets - 2 or 4 tickets available for many games. Section 8, row 13, seats 9/10/11/12. Lisa (408) 445-0460.

Loving outdoor cat needs a home - small grey tiger striped male, 4 years old, neutered, all shots, currently on Advantage flea program. Erica (650) 988-1190.

Wanted: mature, small, light colored dog, male or female. Fran (408) 738-1842.

Garage Sale at 6478 Edgemoor Way, San Jose, Aug 1 & 2. Plants, records, and misc items. 10 a.m. to 4 p.m.

Vacation rental

Rent 3 room ocean front suite in Cozumel. Sleeps 6, 2 baths, kitchenette. Easy walk to town. August 22-29. \$450. Bob (408) 253-3903.

Lake Tahoe-Squaw Valley-Townhse, 3bd/2ba, Balcony View, horseback riding, hiking, biking, golf, river rafting, tennis, ice skating, and more. Summer rates. Call (650) 968-4155, or email at: DBMcKellar@aol.com

Lost & Found

Found in parking lot of N- 248: a man's wristwatch. Call and identify. Hank, ext. 4-4559.

Astrogram deadlines

All Ames employees are invited to submit articles relating to Ames projects and activities for publication in the *Astrogram*. When submitting stories or ads for publication, submit your material, along with any questions, in MS word by e-mail to astrogram@mail.arc.nasa.gov on or before the deadline.

DEADLINE
MON, JUL 27
MON, AUG 1

PUBLICATION
FRI, AUG 7
FRI, AUG 11

Ames Information

A letter from the NASA Administrator

July 10, 1998

Dear Dr. McDonald:

It was a pleasure being at Ames last month to discuss the future of the Center and Moffett Field with you, your employees, and the Commonwealth Club. Under your leadership, Ames has come a very long way toward fulfilling its Agency leadership roles in information technology, astrobiology, and aviation operations systems. You now have a world class staff in these areas and have also forged key partnerships with the academic and corporate sectors to carry out R&D in support of a broad range of NASA missions. I am also very pleased with the mutually supportive relationship you have developed with the cities of Mountain View and Sunnyvale.

Now I want you to develop and implement a plan for the development of Moffett Field to further develop your Agency leadership roles, support NASA's mission, and further our broader education and public outreach goals. To this end, I direct you to do the following:

(1) Within three months develop a conceptual plan for the development of Moffett. I will expect this framework to both spell out a visionary future for the Ames/Moffett complex and provide specific recommendations for the first stage in realizing this future (e.g., California Air and Space Center and the Silicon Valley Computer Museum, planning for a joint-use research campus for information technology and astrobiology, or other options.)

(2) Over the subsequent three months, incorporate the input you receive from Headquarters, the cities of Sunnyvale and Mountain View, and your potential academic and corporate sector partners into refined near-and long-term plans for the development of the vision for the Ames/Moffett complex.

(3) Within one year implement the first stage of your development plan.

I look forward to working with you in this exciting venture.

Sincerely,
Daniel S. Goldin
Administrator

Ames Argonaut selected

Ames has secured yet another Teacher Argonaut, the third in 5 years. Timothy Conway, a 6th grade teacher from Woodside Elementary School (San Mateo County), was one of six educators selected from more than 65 nominees from around the world. He will spend two weeks in March 1999 on location with the JASON Expedition in the Amazon Center for Environmental Education and Research - Peru. Conway was a presenter for numerous JASON IX Teacher Training workshops last fall, sharing his expertise in diving and the undersea world. He has taught the JASON Project in his classroom for the past 3 years.

"JASON X: Rainforests - A Wet and Wild Adventure" is slated for March 1-12, a comparative study of fossil, temperate, and tropical rainforests. The JASON Project tie in with NASA will include the STARDUST Mission, scheduled to launch in February 1999, and the use of aerogel.

Past teacher argonauts from Ames include Becky Carino of Kennedy Junior High in Cupertino (1996) and Lisa Marie Gonzales of T.R. Pollicita Middle School in Daly City (1997).

THE AMES  **Astrogram**

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Editor.....Astrid Terlep

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